



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
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HONOLULU, HAWAII 96809

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DEPUTY DIRECTOR

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

July 20, 2011
Honolulu, Hawaii

Re-Application for Stream Channel Alteration Permit (SCAP.3246.6)
County of Maui Kaholopo'o Bridge Replacement, Haneo'o Gulch
Hāna, Maui, TMK: (2) 1-4-007:004

APPLICANT:

David Goode, Director
Department of Public Works
County of Maui
200 South High Street
Wailuku, HI 96793

LANDOWNER:

Same.

SUMMARY OF REQUEST:

Re-Application for Stream Channel Alteration Permit (SCAP.3246.6) for County of Maui Kaholopo'o Bridge Replacement at Haneo'o Gulch in Hāna, Maui, TMK: (2) 1-4-007:004.

LOCATION: See Exhibit 1.

BACKGROUND:

The Kaholopo'o Highway Bridge is located on Hana Highway, approximately 1.6 miles south of Hana. The existing bridge, constructed in 1917, is in a deteriorated condition with scaling, concrete spalls, exposed rebars, water leakage, missing guardrails, and undermining. The applicant submitted a stream channel alteration permit on July 15, 2002, which the Commission approved on October 6, 2002, with the following special condition:

The applicant shall obtain written concurrence from the State Historic Preservation Division indicating the applicant has a detailed mitigation plan and hired a qualified archaeologist to monitor the construction work. A copy of this written concurrence shall be submitted to the Commission prior to construction activities. See Exhibit 2.

In 2002, the County of Maui solicited construction bids for the project but cancelled the solicitation because the bids received exceeded the amount of money budgeted for the project. Available funds were insufficient to cover the excess amount. Subsequently, the County of Maui redesigned the length of the bridge from 22 feet to 44 feet to provide adequate hydraulic capacity beneath the bridge. The re-designed bridge has changed substantially since the Commission approved the applicant's SCAP in 2002; consequently, the applicant must submit a new SCAP application for the redesigned bridge.

DESCRIPTION:

The current proposed replacement bridge design is based on recommendations presented in the *Preservation Plan for County of Maui Bridges Within the Hāna Highway Historic District*. It will measure approximately 18 feet wide (16 feet between railings) by 44 feet long and will cross Haneo'o Gulch at the same location as the existing bridge. The new bridge will be constructed within the existing County right-of-way and include a concrete deck, concrete abutments, spread footings and retaining walls. The abutment walls will include rock fascia, and the retaining walls will be concrete rubble masonry (CRM). The replacement bridge will also include crash-tested concrete railings measuring 34 inches high by 12 inches wide. See Exhibits 3 and 4.

Construction will be sequenced to maintain the existing abutments in place until the new abutments are completed. This will provide an isolated work area which will enhance best management practices (BMPs) and mitigate potential water quality impacts. Once the new abutments have been built and the work area stabilized, the existing abutments will be removed. An erosion control plan with BMPs will be prepared and submitted as part of the construction plans and specifications. BMPs will include standards measures such as sand bags and silt fences to mitigate water quality impacts.

During the construction period, the bridge will be closed and traffic will be detoured through Hāmoa via Haneo'o Road. This will facilitate construction and expedite resumption of bridge operations.

The preliminary cost estimate for this project is approximately \$2.7 million. This proposed bridge replacement project is a federally-funded project which the County of Maui plans to advertise for construction bids in August 2011. The construction period will take approximately nine months.

ANALYSIS:

2002 Agency Review Comments:

The U.S. Army Corps of Engineers (COE) commented that the proposed activity is authorized under the Corp's Nationwide permit authority for Linear Transportation Projects. The project is subject to Section 404 of the Clean Water Act.

2011 COE comment: The project will not require a Department of the Army (DA) Clean Water Act (CWA) Section 404 permit because all work will occur landward (above) the Ordinary High Water Mark (OHWM).

Note: A Department of Health (DOH) Clean Water Branch (CWB) Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) is not required because a CWA Section 404 permit is not required.

County of Maui Planning Department approved the Special Management Area (SMA) permit for this project on February 19, 2002, and approved subsequent extension on July 1, 2004, April 10, 2006, and May 22, 2009.

On June 28, 2011, the Maui Planning Commission approved the latest extension for the SMA permit.

The U.S. Fish and Wildlife Service, Office of Hawaiian Affairs, Department of Hawaiian Home Lands, and University of Hawaii Environment Center did not submit comments for the 2002 submittal.

2002 DLNR Review Comments:

- Land Division: no comment.
- State Parks: not subject to its authority and permit
- Division of Forestry and Wildlife (DOFAW): not subject to its authority and permit
- Engineering commented:
 1. If utilities are to be suspended along the bridge structure, they should be located and constructed to minimize flood damage, leakage and prevent snagging of debris.
 2. A scour analysis should be conducted to ensure that the design of the structure will minimize erosion at the foundation.
 3. The proposed bridge should not impede the storm water carrying capacity of the body of water it crosses.
 4. When a single span structure replaces a multi-span structure, the pier footings along with the pier columns should be removed to prevent the trapping of debris.
- Division of Aquatic Resources (DAR) was concerned that the construction activities may interfere with the recruitment (migration of juvenile native fish from the ocean upstream) of native freshwater species. DAR originally requested that construction activities to take place in late summer when recruitment is none or minimal. However, after learning the stream is intermittent at the site of the proposed bridge, DAR withdrew this request. DAR recommended that the applicant include a Best Management Practices (BMP) Plan to include:
 1. Mitigative measures during construction activities to prevent contaminants from possibly entering the aquatic environment.
 2. Scheduling site work during periods of minimal rainfall.
 3. Replanting or covering lands denuded of vegetation as quickly as possible to control erosion.
- State Historic Preservation Division (SHPD) recommended:
 1. A detailed mitigation plan (data recovery or preservation) be submitted to SHPD for approval prior to the commencement of any ground disturbing activities.
 2. A qualified professional archaeological monitor be present on-site during all ground altering activities in order to identify, document, record, and provide appropriate mitigation measures, as necessary. This should mitigate any adverse effects to significant historic sites that might occur.

Chapter 343 Environmental Assessment (EA) Compliance Review:

EA Triggers: In accordance with HRS §343-5 (a), the applicant's proposed action does trigger the need for an EA because the proposed project is located on public land and will use public funds.

On September 17, 1995, the County of Maui issued a Final Environmental Assessment and Negative Declaration for the Kaholopo'o Bridge Replacement Project.

Under HRS Ch. 343, there is no process to amend or supplement the FEA. The County of County believes that the new bridge design will not result in significantly greater adverse impacts than previously assessed; and therefore, a new EA is not required.

Based on the Exemption List for the State of Hawaii, Department of Land and Natural Resources as Reviewed and Concurred by the Environmental Council, December 4, 1991, staff believes that this project is exempt under Exemption Class 2:

Replacement or reconstruction of existing structure and facilities where the new structure will be located generally on the same site and will have substantially the same purpose, capacity, density, height and dimensions as the structure replaced. (HAR §11-200-89(a)(2))

Staff Review

On March 30, 2010, AECOS, Inc. prepared a Stream Biological and Water Quality Surveys for the Kaholopo'o Bridge Replacement Project near Hāna, Maui. AECOS biologists surveyed a 2.2 mile segment of Haneo'o Gulch and approximately 328 feet segment of Kaholopo'o Gulch on December 22, 2009, to identify aquatic biota present and survey water quality within these stream branches.

Haneo'o Gulch is an intermittent stream, approximately three miles long, originating on the eastern slopes of Haleakala. At the time of the 2009 survey, no water was flowing in the gulches except in the spring-fed estuary near the ocean. Isolated pools containing water from previous flow or rainfall were present throughout the area. No aquatic fish or crustaceans were observed at the project site, located approximately 0.6 miles from the ocean.

A brief stretch of Haneo'o Gulch near the ocean is home to small populations of native fish and invertebrates. These species could migrate through the project site during freshets. However, the report concluded that the ephemeral nature of pools in close proximity to the project site precluded the establishment of a population in the area directly affected by this project.

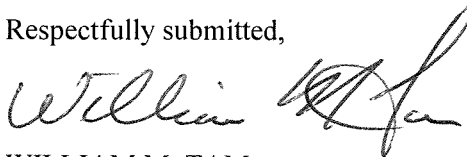
For the 2002 bridge design, approximately 240 cubic yards of silt, sand, basalt gravel and concrete rubble masonry (CRM) would be excavated for the bridge abutments, footings and flooring. For the 2011 bridge design, approximately 610 cubic yards of material will be excavated. Staff believes that the impacts for the current 44-foot replacement bridge will be similar to the impacts of the 22-foot bridge that the Commission approved in 2002 and recommends that the 2002 special condition for the project be retained.

RECOMMENDATION:

That the Commission approve the applicant's Stream Channel Alteration Permit (SCAP.3246.6) for County of Maui Kaholopo'o Bridge Replacement at Haneo'o Gulch in Hāna, Maui, TMK: (2) 1-4-007:004, subject to the standard conditions in Exhibit 5 and the following special condition:

The applicant shall obtain written concurrence from the State Historic Preservation Division indicating the applicant has a detailed mitigation plan and hired a qualified archaeologist to monitor the construction work. A copy of this written concurrence shall be submitted to the Commission prior to construction activities.

Respectfully submitted,



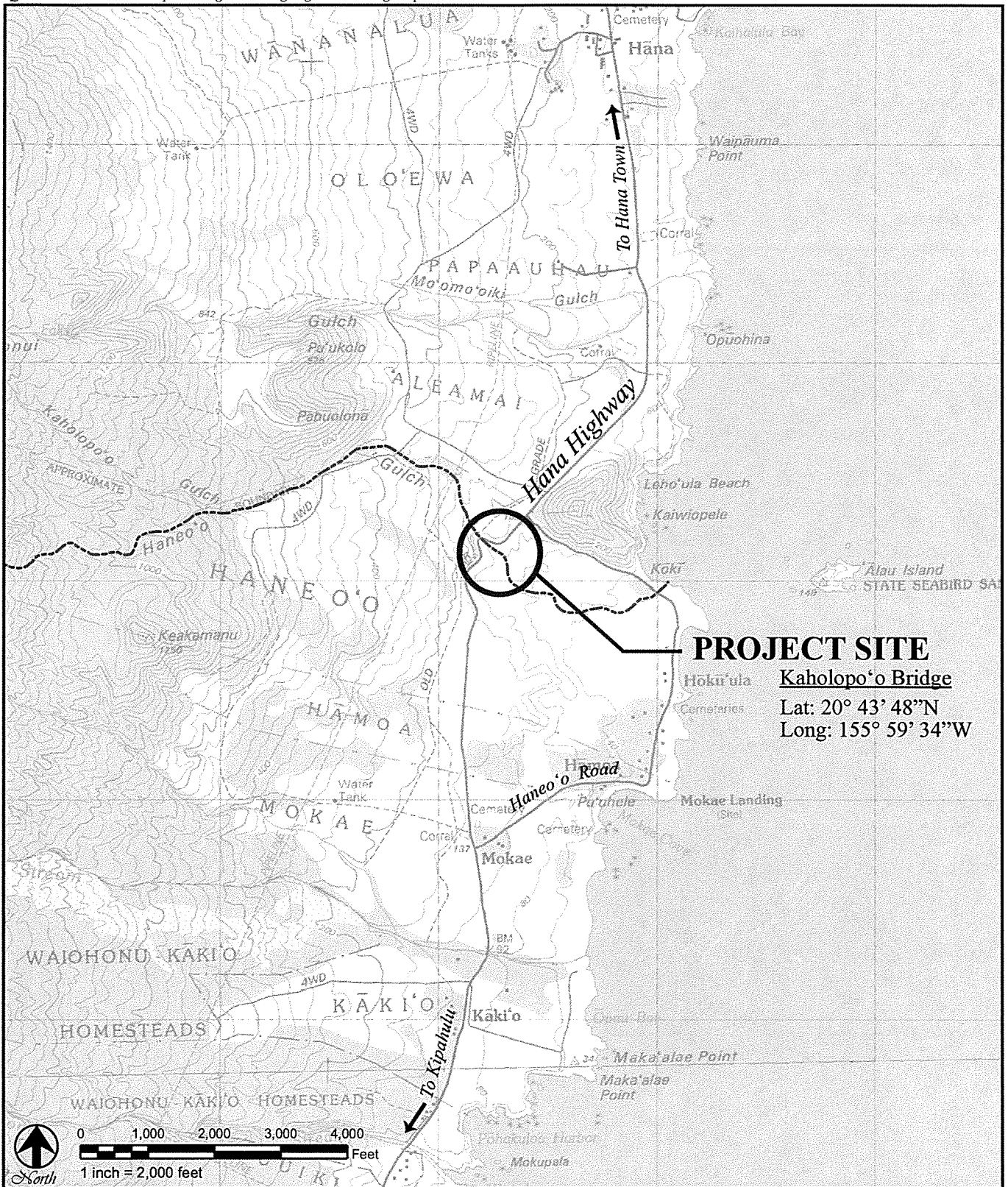
WILLIAM M. TAM
Deputy Director

- Exhibits:
1. Location Map
 2. 2002 Staff Submittal for SCAP.1531.6 (formerly SCAP MA-344)
 3. Site Plan and Construction Details
 4. Project Site Photos
 5. Standard Stream Channel Alteration Permit Conditions

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson



PROJECT SITE

Kaholopoo Bridge

Lat: 20° 43' 48"N

Long: 155° 59' 34"W

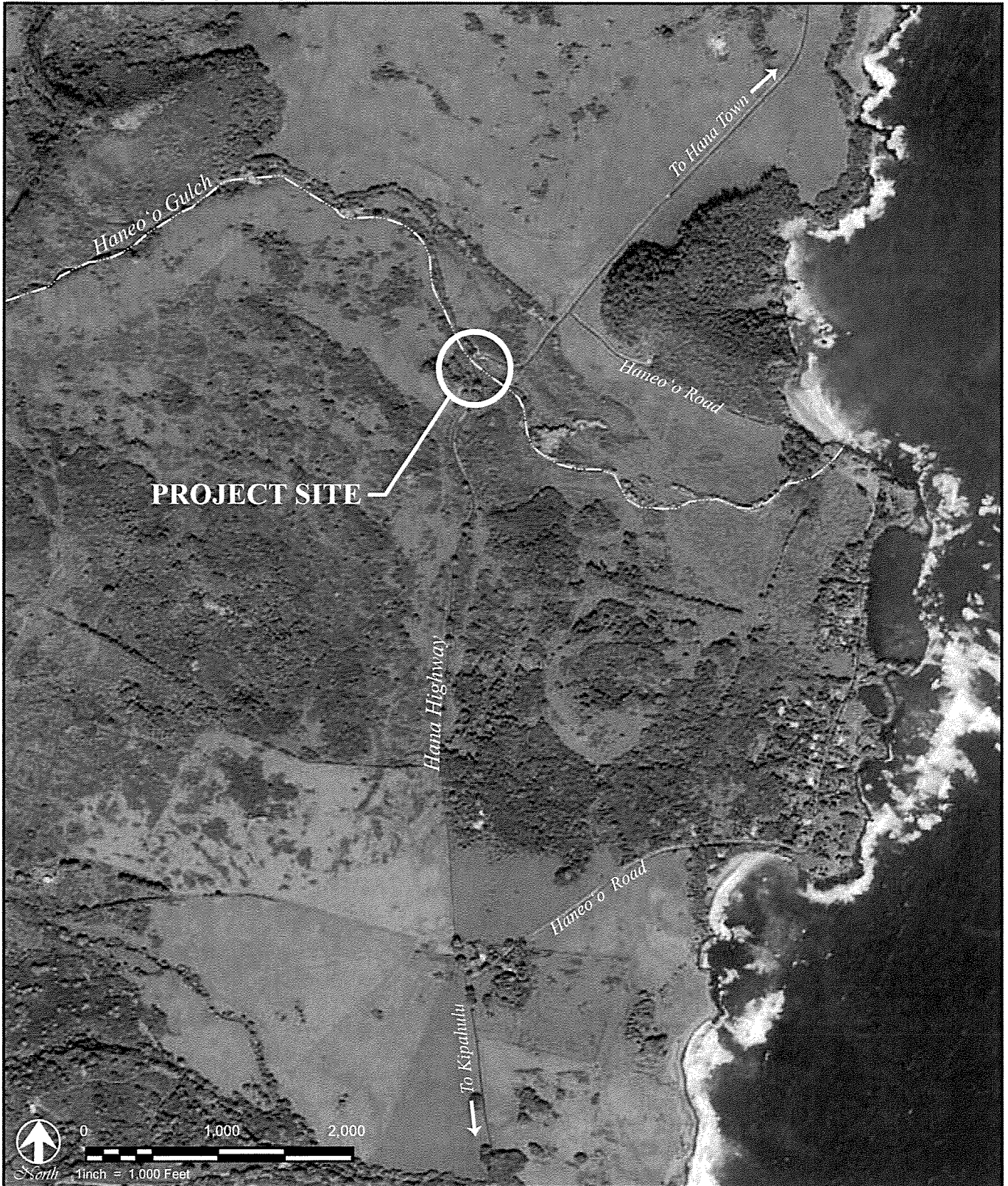


WILSON OKAMOTO
CORPORATION
ENGINEERS • PLANNERS • CONSULTANTS

Source: U.S.G.S. Quad Map
Prepared for: County of Maui Dept. of Public Works

KAHOLOPOO BRIDGE REPLACEMENT

LOCATION MAP



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Source: Google Earth Pro 2009
Prepared for: County of Maui Dept. of Public Works

KAHOLOPO'O BRIDGE REPLACEMENT

AERIAL MAP



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

October 16, 2002
Honolulu, Oahu

Application for a Stream Channel Alteration Permit (SCAP-MA-344)
Department of Public Works and Waste Management, County of Maui
Replace Kaholopo'o Highway Bridge, Haneo Stream
Hana, Maui, TMK: (2) 1-4-007:004

APPLICANT:

County of Maui
Department of Public Works and Waste Management
200 S. High Street
Wailuku, HI 96793

LANDOWNER:

John A. Medeiros Estate
P.O. Box 127
Hana, HI 96713

Keola Hana Maui, Inc
(Hana Ranch Partners, LLC)

LOCATION:

See Exhibit 1.

BACKGROUND:

The Kaholopo'o Highway Bridge is located on Hana Highway, approximately 1.6 miles south of Hana. The existing bridge, constructed in 1917, is in a deteriorated condition with scaling, concrete spalls, section loss as well as exposed rebar, water leakage and undermining. The applicant submitted a completed stream channel alteration permit on July 15, 2002. The proposed replacement bridge design is based on recommendations presented in the Revised Draft Preservation Plan for County of Maui Bridges Within the Hana Highway Historic District.

Approved by Commission on
Water Resource Management
at the meeting held on

OCT 16 2002

Item 7

EXHIBIT 2

DESCRIPTION:

The existing Kaholopo'o Bridge measures 15.1' wide by 22' long, has a posted weight of three tons. The proposed bridge would retain the single-lane function of the bridge and architectural details to maintain the historic character of the bridge and highway. The proposed bridge will measure approximately 18 feet wide by 22 feet long at the location of the existing bridge. The new bridge will consist of a cast-in-place concrete deck supported by the existing concrete deck and cast-in-place concrete abutments and spread footings. The existing center pier will be removed.

The new bridge will be constructed within the County of Maui's Right of Way. The project will consist of: 1) demolition of the existing bridge structure, abutments, supporting pier and adjacent retaining walls; 2) excavation of gulch banks for construction of the new bridge abutments, retaining walls, and bridge superstructure; 3) placement of structural grade fill material; 4) construction of bridge abutment; and 5) restoration of the site.

Exhibit 2 shows an overall site plan for the proposed bridge replacement project.

Exhibit 3 shows across section of the proposed new bridge together with the location of water quality monitoring stations. During construction, the traffic will be rerouted through Hamoa via Haneo'o Road.

Fill material to be placed in Haneo'o Gulch includes structural backfill (30 cubic yards) and concrete (35 cubic yards). Approximately 300 CY of concrete rubble masonry (CRM) will also be used for the retaining walls and bridge abutments. Two hundred forty cubic yards of silt, sand, basalt gravel and CRM will be excavated for bridge abutments, footings, and flooring.

The construction period is anticipated to take six months.

ANALYSIS:

Although we have not received any objections to this project, several agencies have raised concerns.

The Division of Aquatic Resources (DAR) indicates Haneo'o Gulch has probable high biological value. Adjacent streams support several native endemic fishes and Haneo'o Stream supports native *Lentipies Concolor* which is an indicator species of other native fishes. DAR is concerned that the construction activities may interfere with the recruitment (migration of juvenile native fish from the ocean upstream) of native freshwater species. They originally requested that construction activities to take place in late summer when recruitment is none or minimal. However, after learning the stream is intermittent at the site of the proposed bridge, they withdrew the request.

The Department of Health and DAR indicated they wanted the applicant to implement a Best Management Practices Plan (BMPP) to minimize water pollution during construction. The staff contacted the Corps of Engineers and learned that the applicant has a Corps Permit, which requires the applicant to implement a BMPP as part of the Corps Permit.

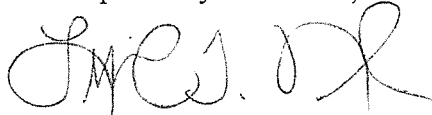
The State Historic Preservation Division (SHPD) indicates the plan for the bridge in the application for a stream channel alteration permit is not the same as the plan in the Special Management Area Permit. SHPD would like to review the final plan for the proposed bridge before construction begins. SHPD also expressed concerns regarding sufficient buffer zones to protect preserved sites and the need for a qualified professional archaeological monitor to identify, document, record, and provide appropriate mitigation measures. The staff recommends a special condition be included in this stream channel alteration permit requiring the applicant to submit a letter of concurrence from SHPD prior to construction.

RECOMMENDATION:

That the Commission approves a stream channel alteration permit for the replacement of Kaholopo'o Bridge at Haneo'o Stream, Hana, Maui (TMK: 1-4-07:004). The permit will be valid for two (2) years subject to our standard permit conditions in Exhibit 4 and the following special condition:

"The applicant shall obtain written concurrence from the State Historic Preservation Division indicating the applicant has a detailed mitigation plan and hired a qualified archaeologist to monitor the construction work". A copy of this written concurrence shall be submitted to the Commission prior to construction activities."

Respectfully submitted,

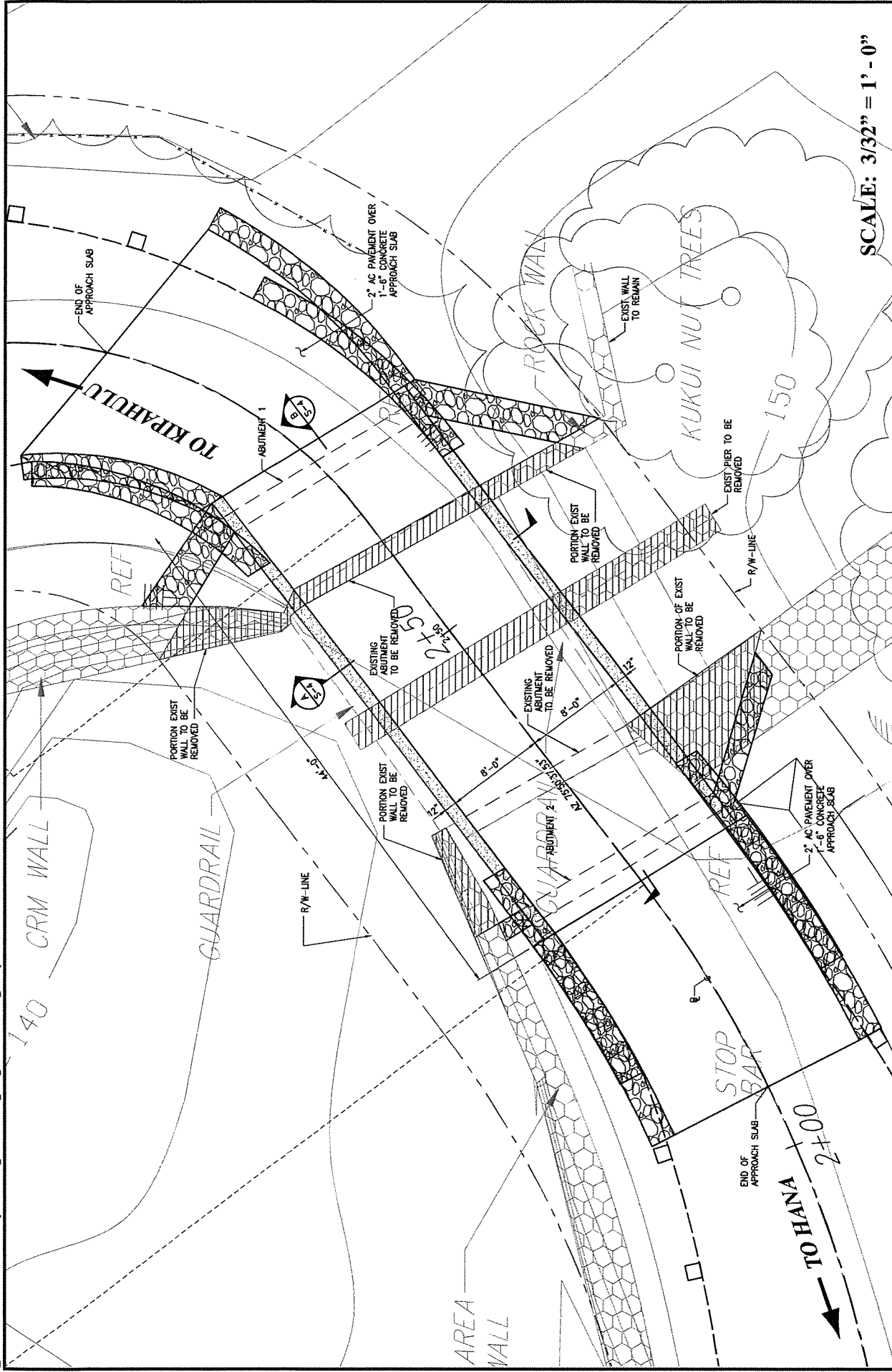


LINNEL T. NISHIOKA

Deputy Director

Exhibit (s)	1	Location Map
	2	Site Plan and Bridge Plan
	3	Bridge Elevation and Water Quality Monitoring Sites
	4	Standard Stream Channel Alteration Permit Conditions

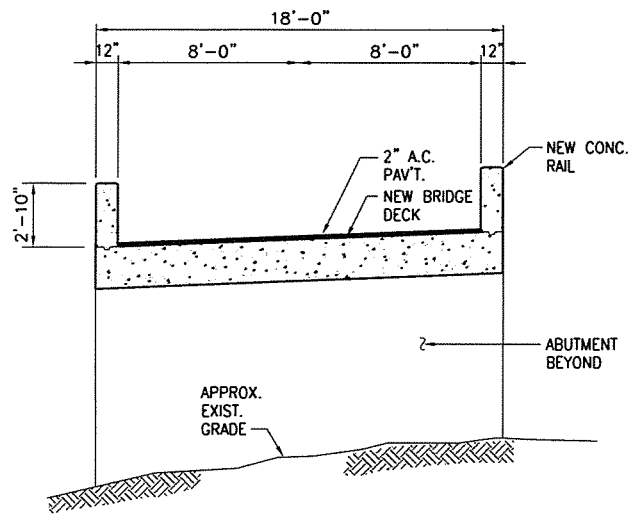
BRIDGE SITE PLAN



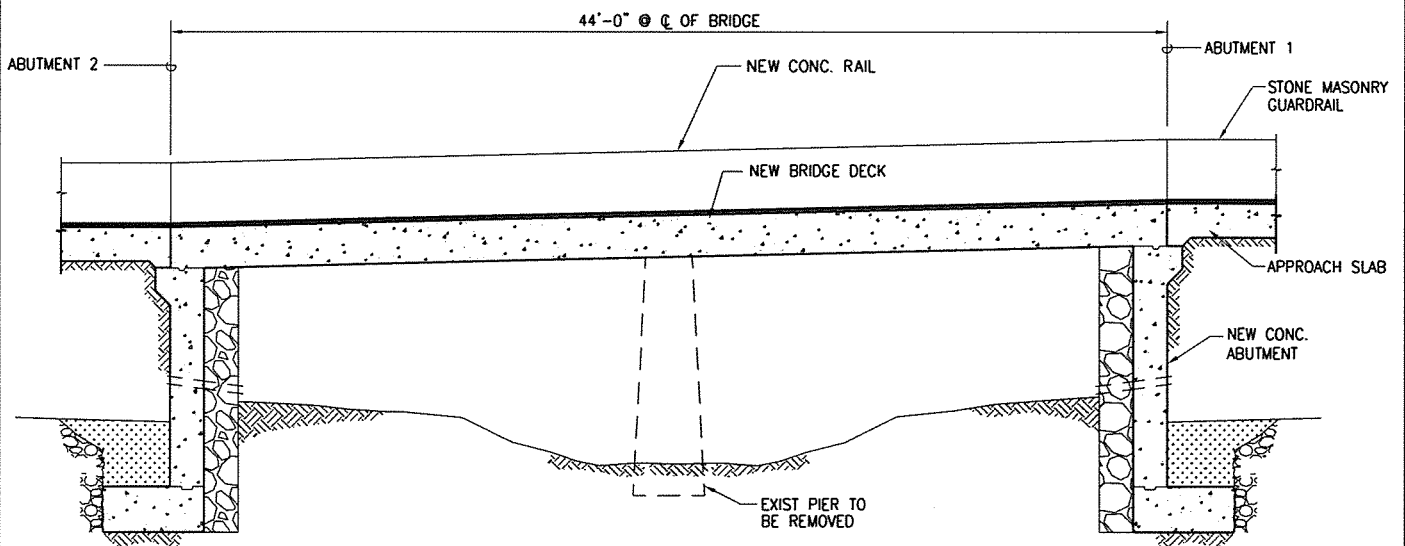
SCALE: 3/32" = 1' - 0"

KAHOLOPO'O BRIDGE REPLACEMENT

BRIDGE PLAN



A SECTION
S-4 SCALE: 1/8"=1'-0"



B NORMAL SECTION
S-4 SCALE: 1/8"=1'-0"

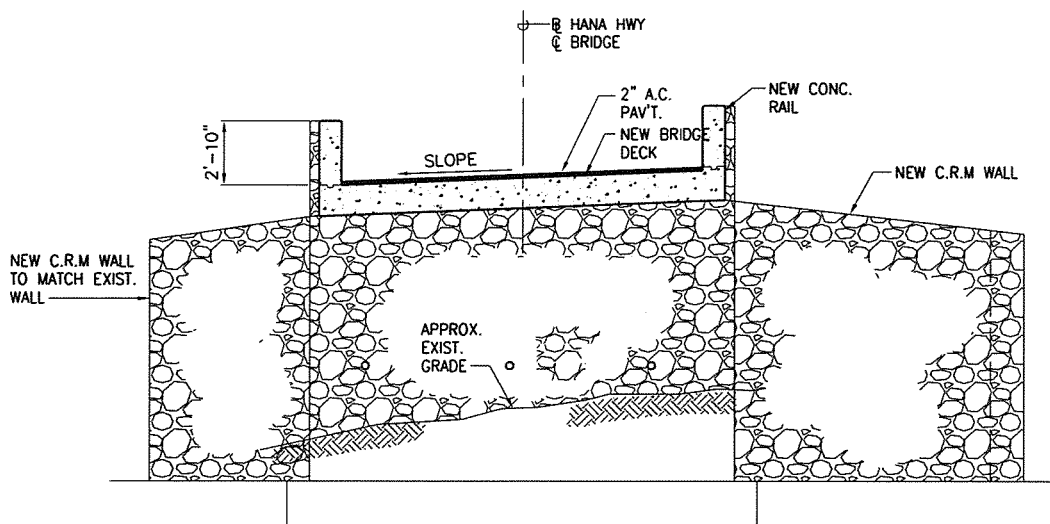


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KAHOLOPO'O BRIDGE REPLACEMENT

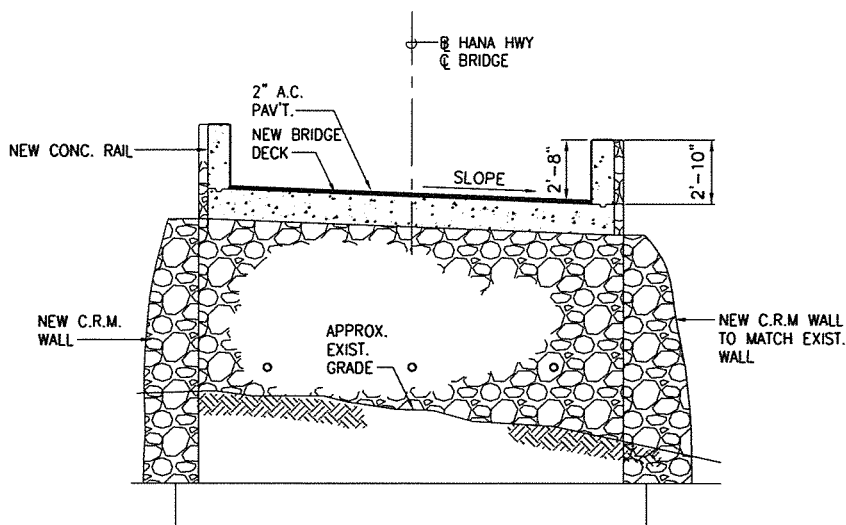
BRIDGE SECTIONS

Prepared for: County of Maui Dept. of Public Works



ABUTMENT NO. 1 ELEVATION

SCALE: 1/8"=1'-0"



ABUTMENT NO. 2 ELEVATION

SCALE: 1/8"=1'-0"



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KAHOLOPO'O BRIDGE REPLACEMENT

ABUTMENT ELEVATIONS

Prepared for: County of Maui Dept. of Public Works



View along Hana Highway over Kaholopo'o Bridge looking west.



View along Hana Highway over Kaholopo'o Bridge looking east.



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KAHOLOPO'O BRIDGE REPLACEMENT

PROJECT SITE PHOTOS



South (downstream) side of bridge.



Northern (upstream) side of bridge.



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PROJECT SITE PHOTOS



Southern Culvert: Facing Downstream.



Northern Culvert: Facing Downstream.



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KAHOLOPO'O BRIDGE REPLACEMENT

PROJECT SITE PHOTOS

STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS
(Revised 9/19/07)

1. The permit application and staff submittal approved by the Commission at its meeting on July 20, 2011, shall be incorporated herein by reference.
2. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.
3. The applicant, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
4. The applicant shall notify the Commission, by letter, of the actual dates of project initiation and completion. The applicant shall submit a set of as-built plans and photos of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
5. Before proceeding with any work authorized by the Commission, the applicant shall submit one set of construction plans and specifications to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
6. The applicant shall develop site-specific, construction best management practices (BMPs) that are designed, implemented, operated, and maintained by the applicant and its contractor to properly isolate and confine construction activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting state waters. BMPs shall control erosion and dust during construction and schedule construction activities during periods of low stream flow.
7. The applicant shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The applicant shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.
8. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.